ABSTRACT

A particulate porous ammoxidation catalyst for use in producing acrylonitrile or methacrylonitrile by reacting propylene, isobutene or tert-butyl alcohol with molecular oxygen and ammonia in a fluidized-bed reactor, the catalyst comprising a metal oxide and a silica carrier having supported thereon the metal oxide, wherein the metal oxide contains at least two elements selected from the group consisting of molybdenum, bismuth, iron, vanadium, antimony, tellurium and niobium, and the catalyst having a particle diameter distribution wherein the amount of catalyst particles having a particle diameter of from 5 to 200 μm is from 90 to 100 % by weight, based on the weight of the catalyst, and having a pore distribution wherein the cumulative pore volume of pores having a pore diameter of 80 Å or less is not more than 20 %, based on the total pore volume of the catalyst and wherein the cumulative pore volume of pores having a pore diameter of 1,000 Å or more is not more than 20 %, based on the total pore volume of the catalyst. A method for efficiently producing this catalyst.